



MARYLAND DEPARTMENT OF THE ENVIRONMENT RESPONSE TO COMMNETS FOR
WRITTEN SUBMISSIONS

Maryland Department of the Environment (MDE) received a written comment from the New Jersey Department of Environmental Protection (NJDEP) on June 25, 2018.

COMMENT: Existing peaking turbines are typically operated during periods of elevated temperatures when electric demand increases and our shared nonattainment area sees ozone levels rise to unhealthy levels. NOX RACT on high electric demand days, or HEDD, should be evaluated on a dollar per ton per high ozone day, in addition to dollar per ton per year criteria. New Jersey established RACT standards in 2009 for peaking turbines generating 15 megawatts or more. The NOX limits associated with Maryland and New Jersey are compared in the following table:

Fuel	Maryland COMAR 26.11.09.08G	New Jersey N.J.A.C. &:27-19.5(g), Table 7
Gas	42 pmvd@15%O2	1.00 Lb/MWh (25 ppmvd@15%O2)
Oil	65 ppmvd@15%O2	1.60 Lb/MWh (42 ppmvd@15% O2)

Maryland's proposed NOX RACT SIP does not represent RACT for existing peaking turbines as shown above. Maryland should adopt NOX limits comparable to New Jersey. In addition, Maryland NOX RACT rule exempts existing turbines with capacity factor of 15 percent or less from the NOX emission limits. The code requires only annual combustion optimization for such turbines. Operation of these low capacity exempted units are often operated on high ozone days, which increases the potential for exceeding the ozone NAAQS. Maryland should remove the exemption.

RESPONSE: MDE disagrees that the rates do not represent RACT and disagrees with New Jersey that the rates should be based on a cost derived from a high ozone day. EPA has based RACT eligibility on annual emission thresholds and has defined cost effectiveness as a figure in dollars per ton of NOX emission reductions per year. RACT has unit by unit variations but the basis is always annual emissions. New Jersey's methodology for evaluating NOX control costs based on high electricity demand day emission levels goes beyond RACT.

MDE understands New Jersey's emphasis on high electricity demand day (HEDD) unit emission limits and the correlation to Maryland's 15% capacity exemption. MDE shares New Jersey's concern for HEDD emissions. MDE will consider New Jersey's NOX emission limits as part of its stakeholder process when evaluating and revising Maryland's NOX emission limits. For instance, that NJDEP allowed a six-year compliance period would be of interest to Maryland's stakeholders.

COMMENT: Maryland should lower the applicability thresholds and adopt New Jersey NOX emission limits. Maryland NOX limits are applicable to existing engines used to compress natural

gas with capacity more than 2400 BHP, while those in New Jersey are applicable to 200 BHP or more capacity threshold as shown in the following table.

	Maryland COMAR 26.11.29.02	New Jersey N.J.A.C. 7:27-19.8
Gaseous Fuel (Rich Burn)	110 ppmvd@15% O ₂ (>2400 BHP) (Approximately 1.64 grams/bhp-hr)	1.5 grams/bhp-hr (>500 BHP) 2.0 grams/bhp-hr (200 to 500 BHP)
Gaseous Fuel (Lean Burn)	125 ppmvd@15% O ₂ (>2400 BHP) (Approximately 1.71 grams/bhp-hr)	2.5 grams/bhp-hr (>500 BHP) 3.0 grams/bhp-hr (200 to 500 BHP)

RESPONSE: Maryland's two major natural gas compression stations have lean burn, two cycle internal combustion engines with a brake horsepower rating greater than 2400 bhp-hr. As shown in your table, Maryland's emission rates are below New Jersey's. MDE will consider whether to include new threshold limits when it proposes revisions to the Maryland Natural Gas Compressor Regulations and evaluates the potential NOX benefit (if any) to the rate.

COMMENT: New Jersey established RACT standards in 2017 for simple cycle turbines combusting natural gas and compressing gaseous fuel. The NOX limits associated with Maryland and New Jersey are compared in the following table:

Fuel	Maryland COMAR 26.11.09.08.G	New Jersey N.J.A.C. 7:27-19.5(l)
Gas	42 pmvd@15% O ₂	42 pmvd@15% O ₂

Although Maryland's NOX limit is similar to New Jersey, Maryland's NOX RACT rule exempts turbines with a capacity factor of 15 percent or less from the NOX emission limits. Operation of these low capacity exempted units are often operated on high ozone days, which increases the potential for exceeding the ozone NAAQS. Maryland should remove the exemption.

RESPONSE: MDE understands New Jersey's emphasis on high electricity demand day (HEDD) unit emission limits and the correlation to Maryland's 15% capacity exemption. MDE shares New Jersey's concern for HEDD emissions. MDE will consider New Jersey's NOX emission limits as part of its stakeholder process when evaluating and revising Maryland's NOX emission limits. For instance, that NJDEP allowed a six-year compliance period would be of interest to Maryland's stakeholders.

COMMENT: The NOX emission limit for MWCs proposed in the SIP revision is high. Maryland should adopt NOX emission limits like New Jersey, as shown below, that reduce NOX emissions from MWCs in PA-NJ-MD-DE area. Mass burn refractory units should not be exempted.

Maryland COMAR 26.11.09.08.H and 26.11.08.08	New Jersey N.J.A.C. 7:27-19.12(a)
205 ppmv (24-hr arithmetic average, mass burn)	150 ppm (calendar day average)

refractory MWC is exempt)	
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RESPONSE: Thank you for your comments and supporting documentation on the Maryland RACT SIP for the 2008 Ozone NAAQS, concerning the Municipal Waste Combustors (MWCs) portion of the RACT SIP and the applicability of a NO_x limit of 205 ppmv as RACT. Parallel to this RACT SIP process, MDE is preparing to propose new NO_x RACT standards for Large MWCs under COMAR 26.11.08.10. This proposed revision requires that Maryland's two Large MWCs shall meet more stringent, individual NO_x 24-hour block average emission rates by May 1, 2019. The Montgomery County Resource Recovery Facility shall meet a NO_x 24-hour block average emission rate of 140 ppmv. The Wheelabrator Baltimore, Inc. facility shall meet a NO_x 24-hour block average emission rate of 150 ppmv. Provided that the schedule is not delayed, a notice of proposed action for the revision will appear in the Maryland Register on August 17, 2018 and a public hearing will take place on September 21, 2018. At this time, the Department anticipates that a final action will be published in the Maryland Register on October 26, 2018, with an effective date of November 5, 2018. To the extent the adopted regulation includes emissions limits which differ from those included in this SIP submittal, the Department will submit the regulation to EPA as a supplement to the 2008 Ozone NAAQS RACT SIP in early summer 2019.